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Imagery analysis report

The Gezhouba (Ko-chou-pa) Dam Project, PRC (S)

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THE GEZHOUBA (KO-CHOU-PA) DAM PROJECT, PRC (S)

INTRODUCTION

1. (U) The Gezhouba (Ko-chou-pa) Dam Project is the largest project of its type in the People's Republic of China (PRC) and will be the first dam constructed on the main stream of the Chingjiang (Chang-chiang) River proper (Yangtze River). This two-stage project has been underway since 1970. The dam is designed for navigation and flood control and to provide hydroelectric power. The damsite is near the city of Yichang (I-chang) in the Xiling (Hsi-ling) Gorge of Hubei (Hupeh) Province.

2. (U) The first stage of the project is underway in the northern channel area (Figure 1). This will include construction of a regulating dam, a generating station, two boat navigation locks, and water release and sand sweeping gates.[1] The second stage, not yet underway, will close off the southern channel (which is now carrying all navigation) and will include one boat navigation lock.[2]

3. (U) The Gezhouba Dam is one of the 120 projects in the PRC's 10-year, Four Modernizations Plan. According to the Ministry of Water Conservancy and Power, the project will be complete in 1985. The first power will be produced in 1982.[2]

DESCRIPTION

4. (U) The damsite for this project is situated in the middle of the Huang Ling anticline which has no deep faults and consists of impermeable bedrock (crystalline of the pre-Cambrian period). The Chingjiang River is divided here into three streams by two small islands, Gezhouba and Xiba (Hsi-pa; Figure 1). The dam will be a concrete structure 70 meters high and a total of 2,561 meters long. It will form a reservoir with a capacity of 1,580,000,000 cubic meters.[3]

Impact on Region

Power Generation

5. (U) This low-head dam will consist of 21 generating units with a total capacity of 2,710 megawatts and an annual generating capacity of 13,800 kilowatt-hours.[1] Figure 2 shows the generating station in the early stage of construction. When complete, the generating station is intended to supply electricity for industrial and agricultural production in the western regions of Hubei, Henan (Honan), and Hunan Provinces and the eastern region of Sichuan (Szechwan) Province.[1]

Flood Control

6. (U) Construction of a dam on the Chingjiang River is necessary for controlling the frequent flooding of the agricultural lands in the middle and lower reaches of the river. The dam will control 1 million square kilometers of drainage area and approximately 70 percent of the flow of the river.[3] The dam's 27 floodgates (Figure 3) are to have a maximum flow of 110,000 cubic meters per second.

Navigation

7. (U) The dam will contain three navigation locks—two on the north bank of the river (Figure 4) and one on the south bank (not yet under construction). Two of the navigation locks are designed for 10,000-ton ships and will be 280 meters long and 34 meters wide.[3] The third navigation lock will handle smaller vessels.

8. (U) Damming of the Chingjiang River will also reduce the water velocity (eliminating hazardous shoals and rapids) and increase the water depth for a distance of more than 70 kilometers upstream.[3] This will make the river navigable for 10,000-ton ships traveling between the Yichang and Sichuan basins.

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REFERENCES

IMAGERY

(TSR) Relevant KEYHOLE imagery acquired from [redacted] was used in the preparation of this report. 25X1

DOCUMENTS

1. "The First Dam on the Yangzi," *China Pictorial,* Mar 79, pp 2-3 (UNCLASSIFIED)
2. "China Unveils Gezhouba Dam on Yangtze," *Engineering News-Record,* Vol 202, No 24, 14 Jun 79, p 18 (UNCLASSIFIED)
3. "The Greatest Dam on Earth," *China Business Review,* January-February 1979, Vol 6, No 1 p 56 (UNCLASSIFIED)

REQUIREMENT

Project 130121NZ

(S) Comments and queries regarding this report are welcome. They may be directed to [redacted] Asian Forces Division, Imagery Exploitation Group, NPIC, [redacted] 25X1 25X1

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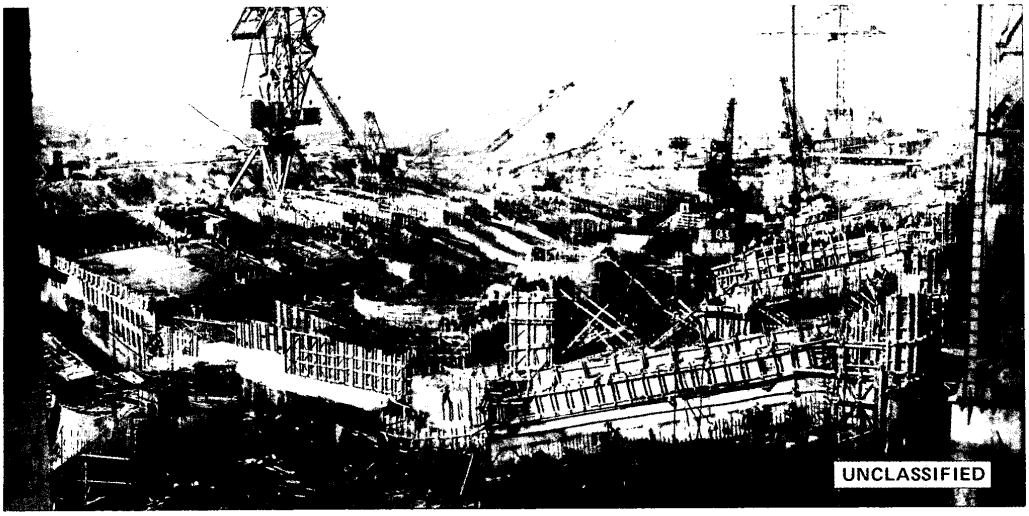
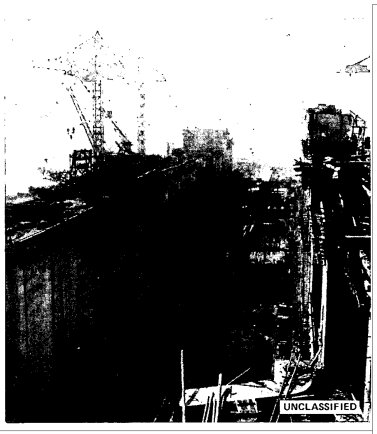


FIGURE 2. GENERATING STATION SUBSTRUCTURE UNDER CONSTRUCTION. (Unclassified photograph from referenced document 1)



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